

Chapter 6: Substance Abuse

Introduction

This chapter will focus primarily on alcohol use among women in Maine. Data on treatment and hospitalizations for other substances are also presented.

Alcohol Use and Abuse

The blood-alcohol concentration of women tends to be higher than that of men after consuming the same amount of alcohol; this due to their lower total body water.^{1, 2} As a result of these biological differences, women may develop physical health problems and feel the immediate effects of alcohol (motor skill impairment) with less alcohol than men.³ Heavy drinking (defined as more than 1 drink per day for women, and more than 2 drinks per day for men)⁴ and/or binge drinking (defined as consuming 4 or more drinks per occasion for women and 5 or more drinks per occasion for men)^{4, 5} are associated with motor vehicle crashes, intimate partner violence, risky sexual behaviors, fetal alcohol spectrum disorders and chronic health conditions (alcohol dependence, liver disease, high blood pressure, heart attack, stroke, and certain kinds of cancer).⁶ Approximately 79,000 deaths in the U.S. were attributable to excessive alcohol use between 2001 and 2005.^{7, 8}

Women who are heavy drinkers may develop cardiovascular problems, cirrhosis and nerve damage in fewer years than men.^{3, 5, 9, 10} Excessive alcohol use may also affect menstrual cycles and increase risk of early menopause, infertility, stillbirths, and premature delivery.^{1, 3, 6} Consuming any amount of alcohol while pregnant, increases risk of the fetus developing physical, learning, and behavioral problems.^{1, 5, 11} Women are also less likely to enter treatment for alcohol than men, which may be due to social stigma.³

Although excessive consumption of alcoholic beverages is associated with negative health consequences, when consumed in moderation alcohol may reduce risk of certain diseases.^{6, 12} For individuals who do drink alcohol, the Dietary Guidelines for Americans 2010 recommend that beverages be consumed in moderation—up to one drink per day for women and up to two drinks per day for men.¹² Studies of moderate consumption of alcohol have shown associations with reduced risk of some cardiovascular diseases.^{1, 12}

Prevalence of alcohol use and abuse

In 2009, about half (51.8%) of Maine women reported having at least one alcoholic beverage each day and about 1 in 10 (10.6%) reported binge drinking at least once in the previous 30 days. The prevalence of Maine women who reported binge drinking in the past month was similar to that of the national average, while the number of Maine women who consumed at least 1 alcoholic beverage in the past 30 days was slightly above the U.S. (Table 6.1).¹³

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Sex

Maine men tend to drink more alcohol than women. According to data from Maine's Behavioral Risk Factor Surveillance Survey (BRFSS), approximately half as many women as men reported binge drinking in the past 30 days (Table 6.1).¹³

Table 6.1. Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex, U.S. and Maine, 2006-2009.

Year	At Least 1 Alcoholic Beverage Past 30 Days ^a					Binge Drinking ^b				
	Maine Females		US Females	Maine Males		Maine Females		US Females	Maine Males	
	%	(95% CI)	Median ^c %	%	(95% CI)	%	(95% CI)	Median ^c %	%	(95% CI)
2006	52.8	(50.4 - 55.3)	49.0	63.5	(60.7 - 66.4)	-	-	-	-	-
2007	51.9	(49.9 - 53.9)	47.9	63.1	(60.7 - 65.4)	10.1	(8.6 - 11.5)	10.1	22.1	(19.9 - 24.4)
2008	53.7	(51.7 - 55.6)	47.7	64.5	(62.2 - 66.8)	11.1	(9.6 - 12.6)	10.0	20.8	(18.6 - 23.0)
2009	51.8	(50.0 - 53.7)	46.9	64.5	(62.3 - 66.8)	10.6	(9.3 - 12.0)	10.6	19.9	(17.9 - 22.0)

Source: BRFSS¹³

^a2006-2009

^b2007-2009

^cBased on 51 states

Age

For both men and women, the prevalence of any alcohol consumption and binge drinking decreased with age. Maine women under 55 years of age were more likely than women over 55 years to report having had at least 1 drink of alcohol in the past 30 days. Maine women under age 44 were more likely than women over age 44 to report binge drinking in the past month. Almost one in four women aged 18-24 reported binge drinking within the previous 30 days (Table 6.2).¹³

Table 6.2. Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex and age, Maine, 2006-2009.*

Age	At Least 1 Alcoholic Beverage Past 30 Days				Binge Drinking			
	Females		Males		Females		Males	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
18-24	52.1	(46.4 - 57.70)	62.0	(56.6 - 67.5)	23.7	(18.3 - 29.1)	38.8	(32.5 - 45.0)
25-34	58.3	(55.4 - 61.3)	70.5	(66.9 - 74.2)	17.8	(15.2 - 20.4)	31.1	(27.1 - 35.2)
35-44	62.1	(59.9 - 64.4)	67.6	(64.9 - 70.2)	14.3	(12.5 - 16.0)	25.1	(22.4 - 27.8)
45-54	56.6	(54.7 - 58.5)	65.9	(63.6 - 68.2)	9.6	(8.4 - 10.8)	20.7	(18.6 - 22.8)
55-64	51.2	(49.3 - 53.1)	62.8	(60.6 - 65.0)	4.8	(4.0 - 5.6)	11.4	(9.9 - 1.9)
65-74	44.0	(41.7 - 46.3)	56.8	(54.0 - 59.7)	2.4	(1.7 - 3.1)	7.1	(5.5 - 8.7)
75+	32.6	(30.3 - 34.9)	50.5	(46.7 - 54.4)	1.0	(0.4 - 1.3)	2.1	(1.1 - 3.2)

Source: BRFSS¹³

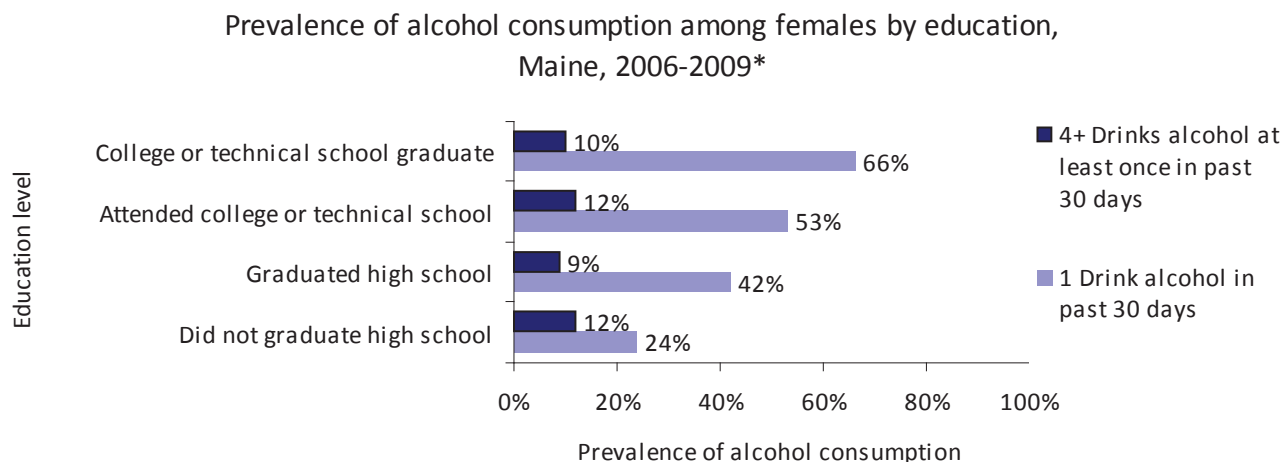
*(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

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Education Level

Moderate alcohol consumption differed among women by level of education. Maine women who had more years of formal education were more likely to have had at least 1 alcoholic beverage in the past 30 days. There was no difference in binge drinking among women by level of education (Figure 6.1).¹³

Figure 6.1.

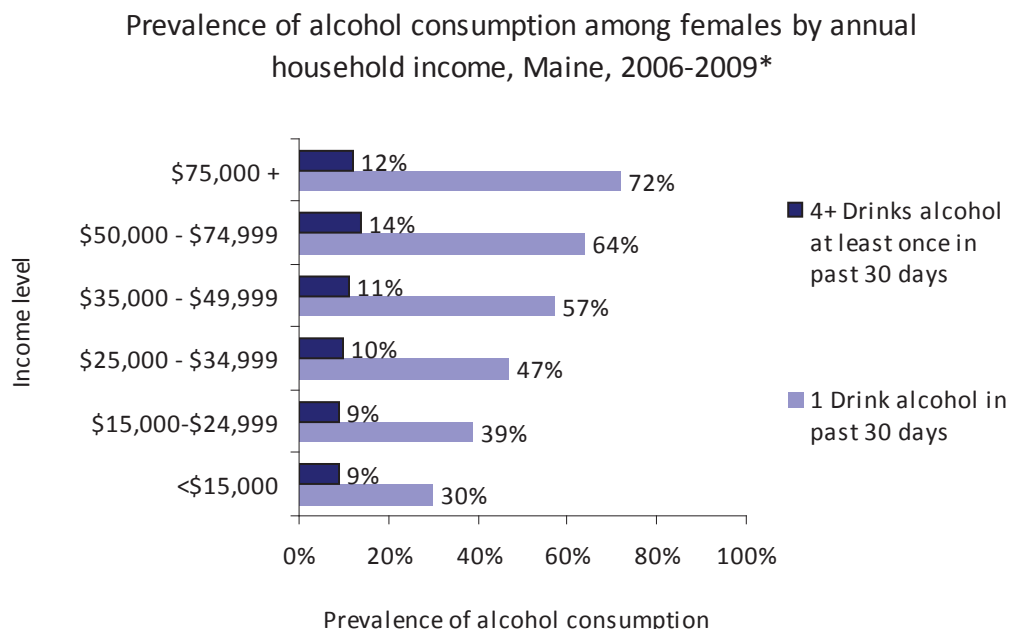


Source: BRFSS ¹³ *(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

Income

The percentage of Maine women who had at least one drink of alcohol in the past 30 days increased with higher annual household income, but similar to education, there were no statistically significant differences in the prevalence of binge drinking by income level (Figure 6.2).¹³

Figure 6.2.



Source: BRFSS ¹³ *(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

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Public Health District

Cumberland and York public health districts had the highest percentage of women reporting any alcohol consumption in the past month. These two districts also had higher binge drinking rates compared to women in other public health districts, but the differences were not statistically significant (Table 6.3).¹³

Table 6.3. Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex and public health district, Maine, 2006-2009.*

PH District	At Least 1 Alcoholic Beverage Past 30 Days				Binge Drinking			
	Females		Males		Females		Males	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Aroostook	39.8	(35.4 - 44.2)	58.6	(53.4 - 63.8)	8.9	(5.9 - 11.8)	17.1	(12.3 - 21.8)
Cumberland	63.2	(60.8 - 65.6)	72.2	(69.4 - 75.1)	13.1	(10.8 - 15.4)	23.7	(20.5 - 26.9)
Central	48.3	(45.4 - 51.1)	57.1	(53.3 - 60.8)	10.6	(8.3 - 12.8)	19.2	(15.7 - 22.8)
Downeast	50.2	(47.0 - 53.6)	61.1	(57.1 - 65.1)	10.4	(7.8 - 13.1)	19.2	(15.2 - 23.2)
Midcoast	55.2	(53.0 - 57.5)	65.8	(63.2 - 68.5)	8.6	(7.1 - 10.2)	20.0	(17.2 - 22.8)
Penquis	45.3	(42.4 - 48.2)	60.1	(56.6 - 63.7)	8.7	(6.8 - 10.6)	23.1	(19.3 - 26.9)
Western	48.8	(46.1 - 51.5)	62.8	(59.6 - 66.1)	9.6	(7.9 - 11.4)	21.0	(17.7 - 24.2)
York	58.2	(55.2 - 61.3)	69.1	(65.8 - 72.5)	12.9	(10.0 - 15.9)	21.7	(18.1 - 25.2)

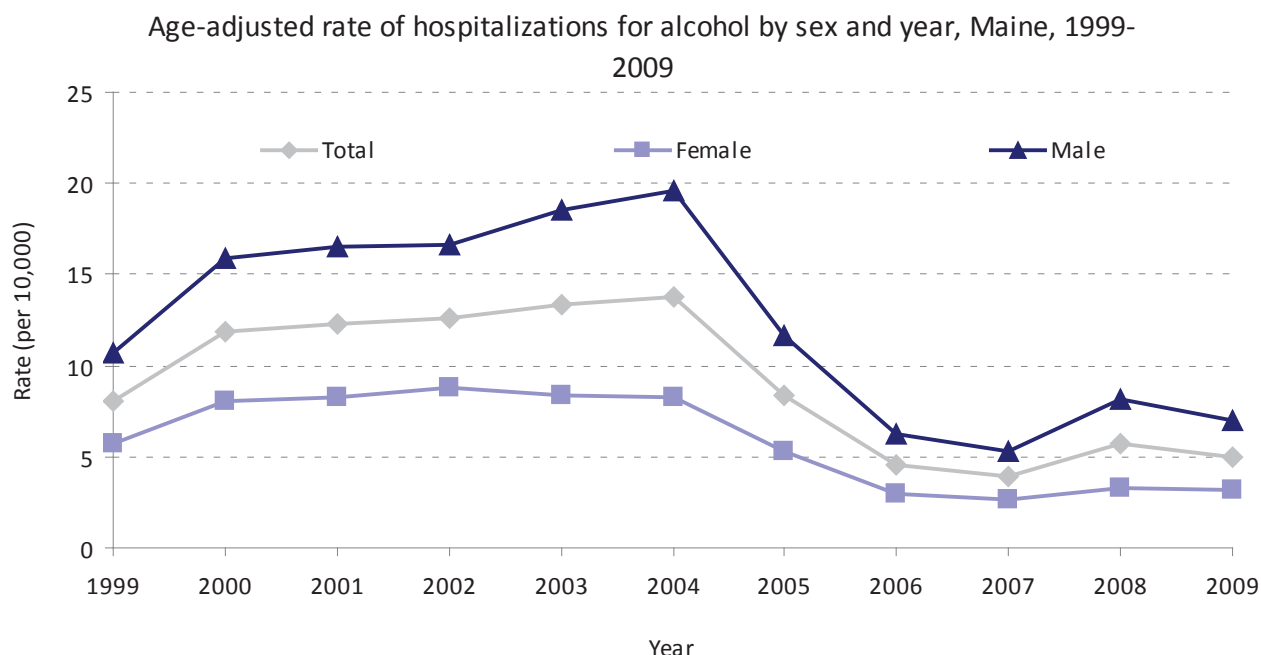
Source: BRFSS¹³

*(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

Alcohol-related hospitalizations

Each year between 2005 and 2009, an average of 240 women were hospitalized as the result of alcohol abuse. Over the past ten years, rates of hospitalizations related to alcohol abuse peaked for men and women in 2004 but then decreased significantly (Figure 6.3). The rate of hospitalizations for alcohol has been consistently lower among women compared to men over time, but the gap between males and females has diminished in recent years (Figure 6.3).¹⁴

Figure 6.3.



Source: Maine Hospital Discharge Data¹⁴
ICD-9 Codes: 303.00-303.93, 305.00-305.03

Illicit Substance Abuse

Illicit drugs include marijuana/hashish, cocaine, inhalants, hallucinogens, crack, and prescription-type psychotherapeutic drugs used for non-medical purposes. Long-term use of psychotherapeutic drugs can lead to physical dependence and addiction. Prescription drugs commonly used or abused for non-medical purposes include opioids, central nervous system depressants, and stimulants. Drug abuse can impact the course of cardiovascular disease, stroke, cancer, HIV/AIDS, hepatitis, and lung disease. Some of these effects occur when drugs are used in high doses or after prolonged use, however, some happen after a single use.¹⁵ Women who use drugs often suffer from other health problems, sexually transmitted diseases, and mental health problems, such as depression. Substance use during pregnancy can have a significant impact of fetal growth and development.

Prevalence

Data on the prevalence of illicit substance use are not available in Maine. Based on national data, men are more likely to use illicit drugs than women. In 2008, 11.5% of adult U.S. women reported using an illicit drug within the past year. In comparison, 16.1% of adult men used at least one illicit

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drug in the past year.¹⁶ According to the 2008 National Survey on Drug Use and Health, approximately 42.9% of women aged 12 or older reported using an illicit drug at some point in their lives.¹⁷

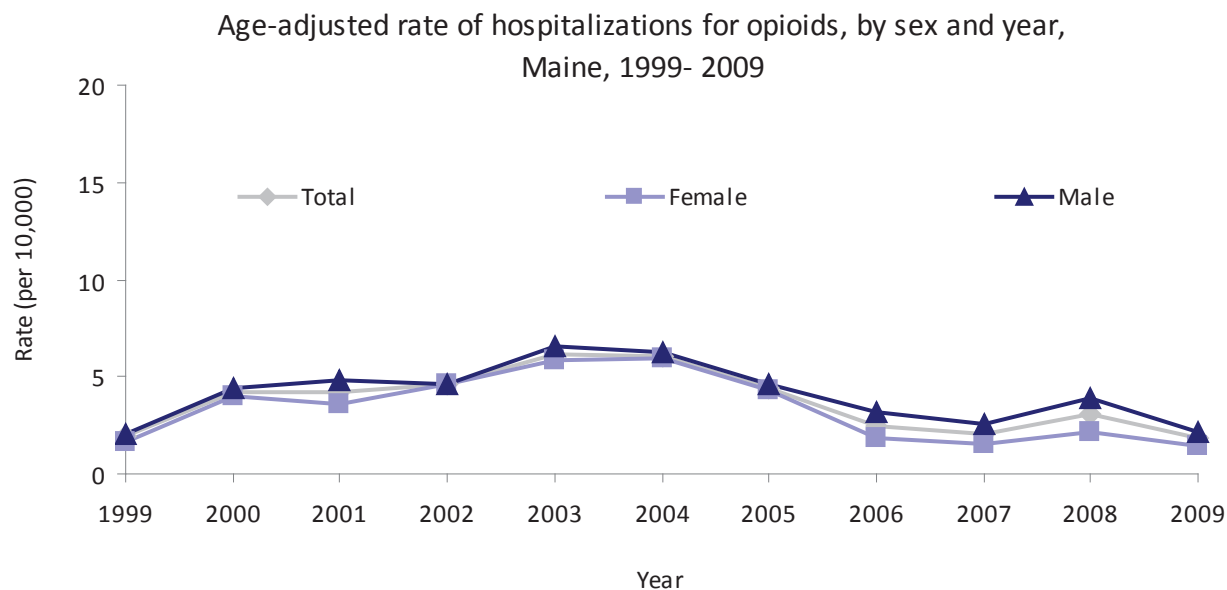
Younger women are more likely to have used illicit drugs than older women. In 2008, 29.9% of U.S. females aged 18–25 years had used illicit drugs in the past year, followed by females aged 12–17 years (18.9%); past-year use was lowest among women aged 26 years and older (8.5%).¹⁶

Marijuana is the most commonly used illicit drug among females of all ages, followed by the non-medical use of psychotherapeutics.¹⁶ About 1 in 7 (13.7%) women aged 18-25 years reported using marijuana in the past year and the same percent reported non-medical use of prescription-type psychotherapeutic drugs.¹⁶

Hospitalizations

Each year between 2005 and 2009, an average of 137 Maine people were hospitalized as the result of opioid use. In 2009, there were 82 women and 134 men hospitalized. Over the past ten years, Maine hospitalization rates for opioid abuse have fluctuated, but the rate in 2009 was similar to the 1999 rate (Figure 6.4). The rate peaked at 5.5 per 10,000 females in 2004, but has declined since that time. Between 1999 and 2009, rate of hospitalization for opioids was similar for males and females in Maine.¹⁴

Figure 6.4.

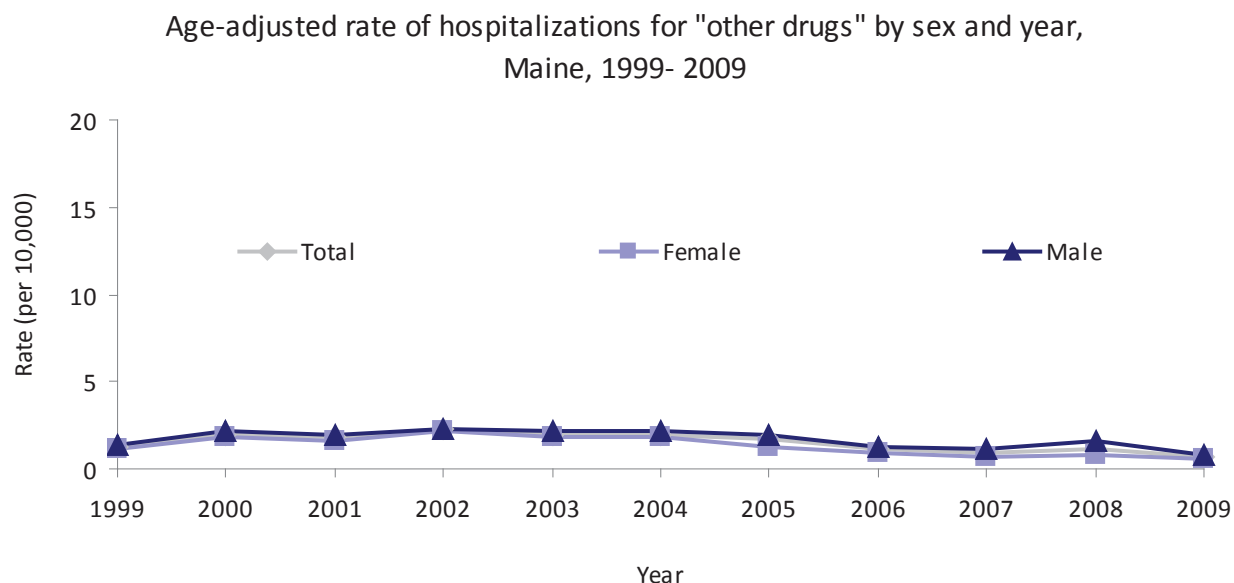


Source: Maine Hospital Discharge Data¹⁴
ICD-9 Codes: 304.00-304.03, 304.70-304.73, 305.50-305.53

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The rate of hospitalizations for “other drugs” is lower than for opioids for both men and women. In 2009, there were 37 women in Maine hospitalized for non-opioid drug use. Rates of hospitalization for “other drugs” remained stable between 1999 and 2009 for males and females (Figure 6.5).¹⁴

Figure 6.5.



Source: Maine Hospital Discharge Data¹⁴
ICD-9 Codes: 304.10-304.60, 304.80-304.93, 305.20-305.43, 305.60-305.93.

Substance Abuse Treatment

Research has shown that comprehensive and sustained substance abuse treatment can help individuals reduce or stop the use of illegal or harmful drugs, improving their ability to function at home, at work, and in society. Attainment of a permanent drug-free state is not a guarantee for those who undertake substance abuse treatment. Relapse is common for injection drug users and those addicted to other drugs. However, substance abuse treatment has proven to be as effective as the treatments for other chronic conditions, including diabetes and asthma.¹⁸

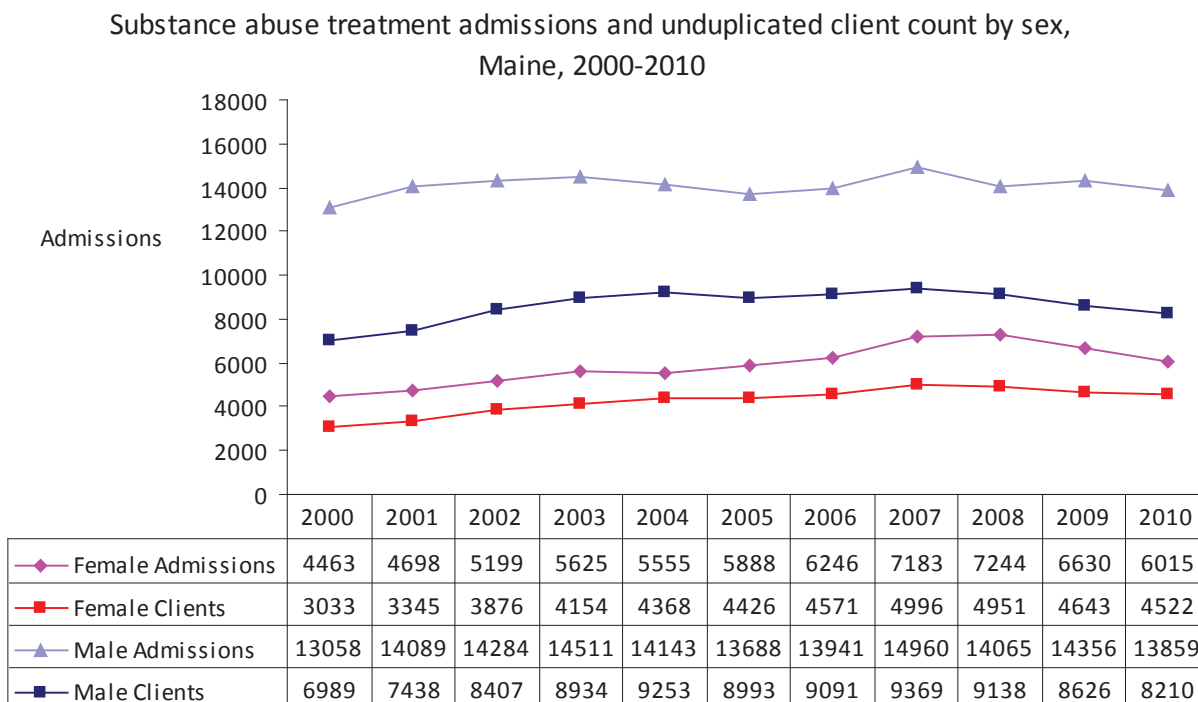
There are currently 183 Maine facilities that handle treatment for substance abuse.¹⁹ In 2010, 4,522 Maine women were served by these facilities. The number of female clients served by Maine’s treatment facilities increased 50% between 2000 and 2010.²⁰

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Sex

More men than women were admitted to treatment facilities in Maine between 2000 and 2010 (Figure 6.6). The pattern of admissions and clients served over this period was similar by sex.²⁰

Figure 6.6.

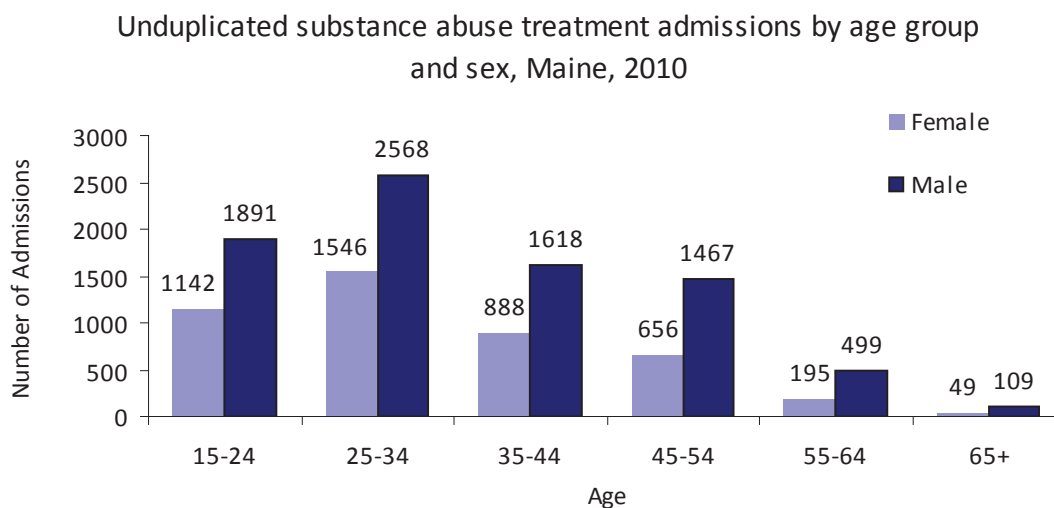


Source: Treatment Data System²⁰

Age

Across all age groups, more men than women were clients at treatment facilities in 2010. The number of women at treatment facilities was highest for 25-34 year-olds (Figure 6.7).²⁰

Figure 6.7.



Source: Treatment Data System²⁰

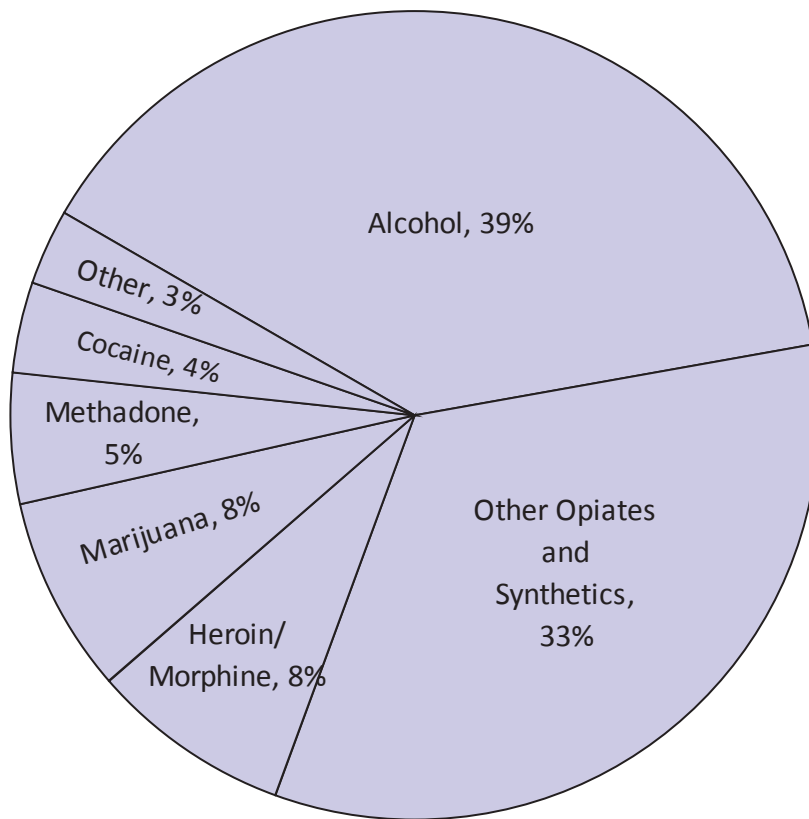
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Drug Type

Over 70% of Maine women at treatment facilities were being treated for alcohol or other opiates and synthetics. Almost 40% were being treated for alcohol abuse, and one-third of women were being treated for other opiates and synthetic drugs (Figure 6.8).²⁰

Figure 6.8.

Unduplicated substance abuse treatment center admissions
by primary drug, female clients, Maine, 2010



Source: Treatment Data System²⁰

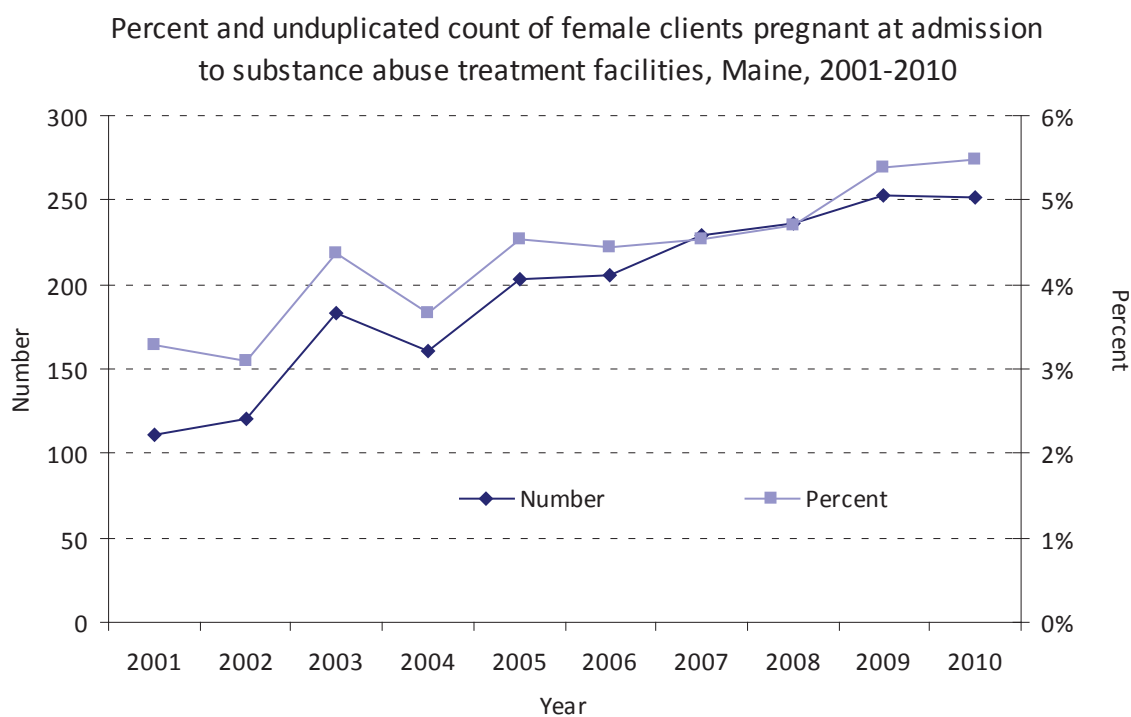
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Pregnant Women

The effects of prenatal drug exposure on a child are not fully known, however studies show that the abuse of various drugs may result in premature birth, miscarriage, low birth weight, and a variety of behavioral and cognitive problems.²¹

In Maine, the percentage of women clients who were pregnant at admission to treatment facilities has increased from 3.3% in 2001 to 5.5% in 2010, a 67% increase (Figure 6.9). The actual number of pregnant clients seeking treatment increased from 111 in 2001 to 251 in 2010, a 125% increase.²⁰ The increase could reflect an increased number of women abusing drugs, or increased awareness by women and providers of the harmful effects of drugs in utero. It is likely that increased attention to this issue has encouraged pregnant women to seek treatment.

Figure 6.9.



Source: Treatment Data System²⁰

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